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Cognitive and Affective Teachers' Skills Determinants as Amalgam to Generate Students' Performance in Nine and Twelve Year Basic Education Schools in Rural Areas as Perceived by Head Teachers in Nyamasheke District, Rwanda

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Abstract
Teachers' cognitive and affective skills play crucial roles in teaching and learning process so that students can acquire knowledge, skills attitudes and values. This study sought to examine the correlation between cognitive and affective teachers' skills determinants and students' performance. It was guided by three objectives i) To establish the level of cognitive, affective teachers 'skills determinants influencing students' performance in nine and twelve year basic education schools in Rwanda. ii) To establish the extent to which cognitive affective teachers' skills determinants correlates with students' performance in nine and twelve years basic education schools in Rwanda iii) To determine key predictors of cognitive, affective teachers' skills determinants influencing students' performance in Rwandan nine year and twelve year basic education schools. A correlation research design was used. 51 Head teachers' participants were purposively selected and involved in the study. Pearson product moment statistical correlation coefficient techniques and step wise multiple regressions were used to analyze data. The study revealed that cognitive and affective teachers' skills determinants rated as low with (Mean 2.27, SD=.1.18). The study also found that there is no correlation between cognitive and affective teachers' skills determinants and they are not predictors of students' mean performance. Whereas teacher's behaviors with (R=-.352,p=.014< .05) and teachers skills on materials management with R=-.301, p=.037<.05 correlate with students' mean performance. The study recommends the government to train teachers on school materials management and behaviors.
Keywords: Cognitive, Affective, Teachers' skills determinants and Student mean performance
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Introduction

Background to the study

Education plays a big role in the development of any country. Particularly cognitive skills of the teacher are very important in helping students to acquire knowledge, skills, attitudes and values. Delivering and developing the content of the lesson by teachers are interconnected in the process of teaching and learning. Skilled teachers in cognitive, affective domains in addition to good environment will enhance the process of helping students in developing their mind. It is crucial, therefore, to know that teachers must possess appropriate cognitive, psychomotor and affective skills in order to address different needs of students for effective and efficient teaching ((Sincero, 2011).

Attitudes of teachers who utilize a high level of standard based instructions practices in their classrooms helped students more than teachers who utilize a low level of standard based instructions (Wayne Dion Rumbaugh, 2014). Encouraged students and relationship with facilitators enhance their performance. Affective education is about the emotions, commitments, feelings, beliefs, values and attitudes of the learners. Different researchers revealed that affective education goes together with personal and social education. (https://www.teach-nology.com/litined/affective_education/).

Bloom taxonomy is used by facilitators in setting and evaluating education performance. The taxonomy helps to measure how the learners think, create and demonstrate their skills and perform better in their studies cognitive and affective skills of teachers lead to high comprehension, learning and transfer of knowledge

(Adams, 2015). Intellectual development is valued with active modeling of cognitive education strategies, commitment of an individual as it is required by society and opportunities reflection are the catalysts to change the student's performance (Karen and Lena,2017). Different studies showed a strong positive relationship between cognitive style and mathematics subjects.

Research questions

1. What is the level of cognitive and affective teachers 'skills determinants influencing students' performance in nine and twelve year basic education schools in Rwanda?
2. To what extent cognitive and affective teachers' skills determinants correlate with students' mean performance in nine and twelve year's basic education schools in Rwanda?
3. What are key predictors of cognitive and affective teachers' skills determinants influencing student performance in primary schools in Rwanda?

Research objectives

1. To establish the level of cognitive and affective teachers 'skills determinants influencing student performance in nine and twelve year's basic education schools in Rwanda?
2. To establish the extent to which cognitive and affective teachers' skills determinants correlate with students' performance in nine and twelve years basic education schools in Rwanda.
3. To determine key predictors of cognitive and affective teachers' skills determinants influencing students' performance in primary schools in Rwanda.

Related Literature

Theoretical framework

The main assumption of cognitive theory is that thoughts are the primary determinants of emotions and behavior. The cognitive approach to learning believes that internal mental processes can be scientifically studied. It is centered on the mental processes by which the learner takes in, interprets, stores, and retrieves information. It compares the functioning of a human mind to that of a computer, in how it processes and reacts to information. Essentially, the cognitive theory believes that in order to understand behavior, it is necessary to first understand what happens in the brain to cause such behavior.

Cognitive learning strategies aim to improve a learner's ability to process information in a deeper way. The deeper the understanding, the more the learner can transfer and apply information to new situations. Beyond surface learning, in which concepts are often limited to short-term memory only, cognitive learning strategies result in better-retained learning, meaning concepts are embedded into long-term memory (https://www.edapp.com/blog/cognitive-learning-theory/)

Empirical studies

Hanushek & et al (2014) conducted a study on the value of smarter teachers International Evidence on teachers' cognitive skills and student performance. The study showed that substantial differences in teacher's cognitive skills across countries are strongly related to the students' performance.

Oladotun (2019) conducted a study on cognitive styles and gender as predictors of students' achievements in summary writing in selected secondary schools in Ibadan, Nigeria. Descriptive research design was employed, 350 respondents drawn from four senior secondary schools participated in the study. The data were analyzed using regression analysis. The study showed that cognitive styles and gender are predictors of student's achievement in summary writing. The study recommended that teachers should be encouraged to individualize instructions through knowledge of learner related variables.

Edoja (2015) did a study on cognitive correlates of physics achievement of some Nigerian senior secondary students. He used correlation research design, purposive and stratified random sampling techniques to get a sample size of 524 senior secondary two students from six education zones in Kogi state of Nigeria. The study revealed that field independency, cognitive tasks, formal reasoning and students' achievement in Physics and higher order cognitive demand questions in physics were significant to students' achievements.

Jan Bietenbeck, Marc Piopiunik and Simon Wiederhold (2018) did a similar study on Africa's skills Tragedy: Does Teachers' Lack of Knowledge lead to low students' performance? They showed that teachers' subject knowledge has modest impact on students' performance. Only the teachers' knowledge is effective in more Developing African countries.

Oyenike et al (2013) did a study on affective and cognitive characteristics of Nigerian Student –Teachers: Towards Developing an effective Teacher Education Framework, the study indicated that teachers trainees possessed varied and widely spread cognitive and affective behavior to teaching profession.

The study "Implications for Planning" was also conducted in Nigeria on teachers and students' academic performance in secondary schools:, the study used descriptive design as post-hoc dataset quantity and quality of

teachers and students' academic performance: 21 schools have been selected as sample size among 31 schools, and ANOVA and Spearman rank were used to analyze data. The study revealed that teachers' qualifications, experience and teacher-student ratio were significantly related to students' academic performance. The study recommended to guide planners on the need of qualified teachers to improve effective teaching and learning in Nigeria (Akinsolu, 2010).

Aina (2015) did a study: "Focusing on Nigerian Teachers" about a review of teachers' self-efficacy, pedagogical content Knowledge (PCK) and out of field teaching: The study showed that the world is not static but dynamic, the success of students depends on the construct of teachers' content knowledge. The study recommended improving teachers' self-efficacy, pedagogical content knowledge and decreasing in out of field teaching in Nigeria.

Aliyu (2013) conducted a study on effect of teachers' qualification on performance in further Mathematics among secondary schools students in Kaduna state in Nigeria; 12 senior secondary schools were selected in four inspectorate divisions, where 160 mathematics students were taken as sample size using random sampling from 234 schools from 12,512 students. Survey Research design has been used, and the study indicated that identified independent variables have impact on further mathematical skills in secondary schools. The study recommended implications for policy intervention to improve the quality of teachers which would automatically affect students' performance .

Schofield (1981) conducted a study on teachers' effects on cognitive and affective pupil outcomes in elementary school mathematics. The study found out that high achievement and high attitudes in teachers were each significantly related to high achievement of pupils and also to the least favorable pupils' attitudes towards subject.

Christensen & Kent (1998) also conducted similar study on the linear relationship between student's report of teacher immediacy behaviors and perceptions of state motivation, cognitive, affective and behavior learning. The study found out that positive, linear relationships between teacher's nonverbal and verbal immediacy in the classroom may contribute to motivating, stimulating, and increasing learning.

Creemers & Kyriakides (2010) conducted further study: "Establishing a dynamic model of educational effectiveness", on school factors explaining achievements on cognitive and affective outcomes: They used a longitudinal study testing the validity of the dynamic model at school level. The multidimensional approach to measure the school level factors was supported and most of the factors and their dimension were revealed to be associated with students' achievements in different learning outcomes.

Blazer & Kraft (2017) in a study on teacher and teaching effects on students' attitudes and behaviors, found out that upper teachers have large effects on self- reported measures of self –efficacy in mathematics, happiness and behaviors in class. Students' attitudes and behaviors are predicted by teaching practices most proximal to the measures, including teachers' emotional support and class organization. The study also revealed that teachers who are effective at improving test scores often are not equally effective at improving students' attitudes and behaviors. The results of the study lend empirical evidence to well establish theory on multidimensional nature of teaching and the need to identify strategies for improving the full range of teachers' skills.

Joseph et al (2019) did a study: "Predicting student achievement with the classroom Assessment scoring system" on observations of effective teacher-student interaction in secondary school classrooms with multi-level modeling techniques used with a sample of 643 students enrolled in 37 schools to predict future student achievement from observed teacher interactions with students in the classroom. The study indicated that classroom characterized by a positive emotional climate, with sensitivity to adolescents needs and perspectives, use of diverse and engaging instructional learning formats, and a focus on analysis and problem solving were associated with higher levels of students' achievements. Effects of higher quality teacher- students' interactions were greatest in classroom with fewer students.

Walker & Slear (2011) did a study in USA on the impact of school principal's leadership behaviors on the efficiency of new and experienced middle school teachers. The study was about a diverse group of middle school teachers from a mid-Atlantic state. 366 teachers were used as sample size, examining whether various school principal's behaviors affected the efficacy of new and experienced teachers differently. The results indicated that there is a positive relationship between high levels of teachers' efficacy and increased achievement as well as a positive link between school principal's behavior and teacher efficacy. The teacher's efficacy is significantly affected by school principals' behavior based on years of teaching experience.

Research Methodology

The design for this study is correlation research design. The research participants for this study were from a total sample size of 51 of head teachers of nine and twelve year basic education schools in Rwanda by using purposive sampling. Questionnaire was administered to head teachers as instruments designed by researcher asking their views on cognitive and affective teachers' skills determinants level to find out the influence of cognitive and affective teachers' skills determinants and students' mean performance in nine years and twelve

years basic education. Data analysis was used by using SPSS (version 2020).

5. Findings and Discussions

5.1 Cognitive and affective teachers' skills determinants

School input play a big role in every education system, where the students' performance is based on educational input such as knowledge and affection of the teachers toward students. Data obtained on Cognitive and affective teachers' skills determinants are as follows:

Table: 5.1 Cognitive and affective teachers' skills determinants

Descriptive Statistics	Mean	Std. Deviation	Skewness	Std. Error
Teachers have knowledge to cooperate with parents with students problems	3.35	0.64	-0.46	0.34
Teachers have knowledge of using different learning facilities in teaching	3.15	0.85	-0.94	0.34
Teachers have ability to communicate to students all activities to take place	3.13	0.87	-0.66	0.34
Teachers have ability to prepare exercises to give students helping their critical thinking	3.10	0.75	-0.81	0.34
Teachers have knowledge to report in the meeting of PTA to inform parents how to help their children	3.10	0.97	-0.80	0.34
Teachers behaviors have impact on student learning	3.08	0.79	-0.42	0.34
Teachers have knowledge to give proper guidance to students	3.06	0.91	-0.66	0.34
Teachers have ability to help slow students in the classroom	3.04	0.74	-0.72	0.34
Teachers visit the students at home to know their problems	3.02	1.00	-0.71	0.34
Teachers possess knowledge to prepare their pedagogical documents helping learning	2.98	0.93	-0.45	0.34
Teachers have professional training in the their subjects	2.96	0.82	-0.64	0.34
Teachers understand the consequences of humiliating students who failed to respond in the classroom	2.94	0.81	-0.64	0.34
Teachers arrive at work on time	2.87	0.80	-0.03	0.35
Teachers understand the importance of giving feedback to students on time	2.83	0.86	-0.51	0.34
Teachers possess skills to evaluate all students during teaching	2.79	1.03	-0.41	0.34
Teachers possess skills to implement curriculum as it is required	2.77	0.99	-0.33	0.34
Teachers have skills to create games involving students in co-curricular activities	2.71	1.18	-0.44	0.34
Teachers have ICT skills on tools used in teaching	2.65	1.23	-0.35	0.34
Teachers have skills to use wall pictures related to his subject	2.65	1.34	-0.30	0.34
Teachers have skills to manage materials delivered to them	2.60	1.27	-0.24	0.34
Teachers have skills to cooperate with students	2.58	1.03	-0.17	0.34
Teachers possess skills to give many exercises to students	2.56	1.15	-0.03	0.34
Teachers have knowledge of using audio and audio-visual materials	2.48	1.09	-0.15	0.34
Teachers have knowledge in making local materials in the absence of original ones	2.44	0.97	0.04	0.34
Teachers have skills to plan a remedial activity to students who have problems in their lessons	2.33	1.19	0.10	0.34
Teachers have skills to create conducive environment to facilitate students to learn	2.33	1.12	0.25	0.34
Teachers have knowledge to use concrete materials in helping students to create new materials	2.27	1.18	0.25	0.34
Total mean	75.79			
Average mean	**2.81**			

Table 5.1 shows the mean values for the scores of cognitive and affective teachers' skills determinants in nine and twelve year basic education as perceived by head teachers. Respondents showed that teachers' knowledge to cooperate with parents in solving students' problems were higher (Mean=3.35, SD=0.64). Teachers' knowledge of using different learning facilities in teaching ranked as high with (Mean=3.15, SD=0.85), teachers' ability to communicate to students all activities to take place with (Mean 3.13, SD=0.87). These results corroborates with the remarks of Stephen et al (2002) who found out that communication in education as well as other disciplines must start to promote communication training for all teachers. Teachers' ability to prepare exercises to give to students helping their critical thinking and teachers' knowledge to report in the meeting of PTA to inform parents how to help their children were rated high (Mean=3.10,SD=075, Mean=3.10,SD=0.75), Atwell (2021) also found that partnership between families, schools and communities in which all stakeholders share in the responsibility of a child's academic success are beneficial to every one particularly children and school. The factors such as teachers' behaviors have impact on students' learning. Teachers' knowledge to give appropriate guidance to students, teachers' ability to help slow learners in the classroom, teachers' visit of the students at home to know their problems, teachers' knowledge to prepare their pedagogical documents helping in learning and teaching, teachers' professional training in their subjects, teachers' understanding of the consequences of humiliating students who failed to respond in the classroom , teachers' arrival at work on time, teachers' understanding of the importance of giving feedback to students on time, teachers' skills to evaluate all students during teaching and learning process, teachers' skills to implement curriculum as it is required, teachers' skills to create games involving students in co-curricular, teachers' ICT skills on tools used in teaching, teachers' skills to use wall pictures related to his/her subject, teachers' skills to cooperate with students, teachers' willingness to give many exercises to students and teachers' skills to manage materials delivered to them were rated as high with magnitude ranging between 2.51 and 3.25.

Teachers' knowledge of using audio and audiovisual materials was rated low with (Mean=2.48,SD=1.09), teachers' knowledge in making local materials in the absence of original ones ranked low with (Mean=2.44,SD=0.97), teachers' skills to plan a remedial activity to students who have problems in their lessons was rated low (Mean=2.33,SD=1.19), teachers' skills to create conducive environment to facilitate students learning was rated low (Mean=2.33, SD=1.12) and teachers' knowledge to use concrete materials in helping students to create new materials were with mean value varying between 1.76 and 2.50.

Finally, the results indicated in table 5.3 showed that the average mean of respondents views on cognitive and affective teachers' skills determinants rated as low with (Mean=2.27,SD=1.18). In accordance with this, the study conducted by Krolak et al (2013) showed that unaccountable teachers would activate social categories and use for assessment, whereas accountable teachers would be directed to individual attributes of students. It is to be noted that teachers' cognitive and affective skills level will have impact on students' performance.

5.2 Correlation between cognitive and affective teachers' skills determinants and students' mean Performance

In order to establish the extent to which cognitive and affective teachers' skills determinants correlates with student students mean performance in Nyamasheke District, Pearson Product moment correlation was computed. Table 5.2 gives the summary of the correlation coefficient as well as the coefficient determination on students' performance in nine and twelve year basic education in Nyamasheke district in Rwanda.

Table 5.2: Correlation between cognitive and affective teachers' skills determinants and student mean performance.

Correlations	R	R2	P value
Teachers have professional training in the their subjects	1	1	0.256
Teachers understand the consequences of humiliating students who failed to respond in the classroom	0.219	0.048	0.134
Teachers have knowledge in making local materials in the absence of original ones	0.211	0.045	0.151
Teachers have skills to plan a remedial activity to students who have problems in their lessons	0.145	0.021	0.327
Teachers have knowledge to cooperate with parents with students problems	0.11	0.012	0.457
Teachers have knowledge to use concrete materials in helping students to create new materials	0.099	0.010	0.502
Teachers have skills to create games involving students in co-curricular activities	0.074	0.005	0.615
Teachers have knowledge of using audio and audio-visual materials	0.07	0.005	0.636
Teachers have ability to communicate to students all activities to take place	0.037	0.001	0.801

Correlations	R	R2	P
Teachers have skills to create conducive environment to facilitate students to learn	-0.008	0.000	0.959
Teachers possess skills to evaluate all students during teaching	-0.01	0.000	0.944
Teachers understand the importance of giving feedback to students on time	-0.01	0.000	0.946
Teachers have knowledge of using different learning facilities in teaching	-0.022	0.000	0.885
Teachers possess skills to implement curriculum as it is planned	-0.064	0.004	0.666
Teachers have ability to help slow students in the classroom	-0.067	0.004	0.653
Teachers arrive at work on time	-0.074	0.005	0.622
Teachers visit the students at home to know their problems	-0.076	0.006	0.606
Teachers have skills to use wall pictures related to his subject	-0.11	0.012	0.458
Teachers have skills to cooperate with students	-0.121	0.015	0.411
Teachers have knowledge to report in the meeting of PTA to inform parents how to help their children	-0.154	0.024	0.297
Teachers possess knowledge to prepare their pedagogical documents helping learning	-0.167	0.028	0.256
Teachers possess skills to give many exercises to students	-0.177	0.031	0.228
Teachers have ICT skills on tools used in teaching	-0.183	0.033	0.213
Teachers have ability to prepare exercises to give students helping their critical thinking	-0.268	0.072	0.066
Teachers have knowledge to give proper guidance to students	-0.281	0.079	0.053
Teachers have skills to manage materials delivered to them	-0.301	0.091	0.037
Teachers behaviors have impact on student learning	-0.352	0.124	0.014

The results presented in table 5.2 showed that there is no significant correlation between teachers' professional training in their subjects and students' mean performance (R=.256, p>.05.) However, the coefficient of determination (R^2 =1) indicates that 10% of the school mean performance is accounted by teachers' professional training in their subjects.

From table 5.2, it is also clear that there is no significant correlation between teachers' understanding of the consequences of humiliating students who failed to respond in the classroom with (R=0.219, p>.05). In fact, the coefficient of determination (R^2= 0.048) indicates that only 4.8% of students' performance in nine and twelve years basic education was accounted by difference in teachers' understanding of the consequences of humiliating students who failed to respond in the classroom. Teachers' knowledge in making local materials in the absence of original ones is (R=0.211, p>.05). The coefficient of determination (R2=0.045) revealed that 4.5% of students' mean performance was accounted for teachers' knowledge in making local materials in the absence of original ones. The results of Pearson Product moment correlation coefficient indicates that teachers' skills to plan a remedial activity to students who have problems in their lessons does not significantly correlate with mean performance in nine and twelve years basic education in Nyamasheke District with (R=0.145, p>.05). The coefficient of determination (R^2=0.021) is accounted 2.1% of students' mean performance. The results also showed that teachers' knowledge to cooperate with parents with students problems did not significantly correlate with students' mean performance (R=0.11, P > .05). Teachers' knowledge to use concrete materials in helping students to create new materials with (R=0.099, P > .05, the coefficient of determination (R^2=0.010) indicates that 1% of the school mean performance is accounted for by cognitive and affective teachers' skills determinants. Teachers' skills to create games involving students in co-curricular activities did not significantly correlate with students' mean performance (R=0.074, p > .05), the coefficient of determination (R2= 0.005) indicates that 0.5% of the school mean performance is accounted for by cognitive and affective teachers' skills determinants. For teachers' knowledge of using audio and audio-visual materials, there is no significant correlation with students' mean performance (R= 0.07, p > .05). This is because as the coefficient of determination (R^2=0.005)indicates, teachers' knowledge of using audio and audio visual materials is accounted for only 0.5% of the school mean performance.

As for teachers' ability to communicate to students all activities to take place, the results showed that there is no significant correlation between teachers' ability to communicate to students and students' mean performance (R=0.037, p>.05), the coefficient of determination (R^2=0.001) indicates that ability to communicate to students all activities to take place accounted for only 0.1% of student mean performance.

Teachers' skills to create conducive environment to facilitate students to learn has no significant correlation with students' mean performance (R=-0.008, p>.05), the coefficient of determination (R^2=0.000) indicates that teachers' skills to create conducive environment for facilitating students to learn is accounted for 0% of students' mean performance in nine and twelve years basic education.

Teachers' skills to evaluate all students during teaching and learning process has no significant correlated

with students' mean performance (R=-0.01, p>.05), this is because as the coefficient of determination (R^2=0.000) indicates, teachers' skills to evaluate all students is accounted for 0% of students' mean performance.

The results from table 5.2 indicated that no significant correlation between teachers' understanding of the importance of giving feedback to students on time and students' mean performance (R=-0.01, p>.05). This is because as the coefficient of determination (R2=0.000) indicates, importance of giving feedback to students on time is accounted for 0% of students' mean performance.

As table 5.2 also indicates that there is no significant correlation between teachers' knowledge of using different learning facilities in teaching and vice versa and their students' mean performance in nine and twelve years basic education (R=-0.022,p>.05). In fact, the coefficient of determination (R^2=0.000) indicates that 0% of students' mean performance was accounted for by teachers' knowledge of using different learning facilities in teaching.

As table 5.2 reveals there is no significant correlation between teachers' skills to implement curriculum as it is planned and the students' mean performance in nine and twelve years basic education (R=-0.064, p>.05). The coefficient of determination (R^2=0.004) indicates that only 0.4% of students' mean performance in nine and twelve years basic education was accounted for by the teachers' skills to implement curriculum as it is planned.

As table 5.2 also indicates there is no significant correlation between teachers' ability to help slow learners in the classroom and students' mean performance (R=-0.064, p>.05). In fact, the coefficient of determination (R^2=.004) indicates that only 0.4% of students' mean was accounted for by teachers' ability to help slow learners in the classroom.

Another look at table 5.2 reveals that there is no significant correlation between teachers' arrival at work on time and students' mean performance (R=-0.074, p>.05). As it can be seen in the table, the coefficient of determination (R^2=0.005) indicates that 0.5% of students' mean performance was accounted for by teachers' arrival at work on time.

Table 5.2 equally indicates that there is no significant correlation between teachers' visiting of the students at home to know their problems and students' mean performance in nine years and twelve years basic education (R=-0.076, p>.05). In fact, the coefficient of determination (R^2=.006) indicates that 0.6% of students' mean performance was accounted for by teachers' visiting students at home to know their problems.

As table 5.2 also reveals, teachers' skills to use wall pictures related to their subjects also does not correlate with students' mean performance (R=-0.11, p>.05). As it can be seen in the table, the coefficient of determination (R^2=.012) indicates that 1.2% of students' mean performance was accounted for by the teachers skills' to use wall pictures related to their subjects.

Teachers' skills to cooperate with students does not significantly correlate with students' mean performance (R=-.121, p>.05). This is because the coefficient of determination (R2=.015) indicates that 1.5% of school mean performance in nine years and twelve years was accounted for by the teachers' skills to cooperate with students during the teaching and learning process.

Furthermore, table 5.2 indicates that the teachers knowledge to report in the meeting of PTA to inform parents how to help their children does not correlate with students' mean performance in nine and twelve years basic education (R=-.154, p>.05), these finding conflict with that of Darko et al (2021) who found out that parental involvement in their children's education was crucial to their children 'academic performance. The coefficient of determination (R^2=.024) indicates that teachers' knowledge to prepare their pedagogical documents helping in learning is accounted for 2.4% of students' mean performance in nine years and twelve years basic education, which means that students with teachers who have knowledge to prepare pedagogical documents perform better than students with teachers who was not trained to prepare pedagogical documents.

The findings in table 5.2 further indicate that teachers' skills to give many exercises to students also does not correlate with students' mean performance in nine years basic education (R=-.177, p p>.05). The coefficient of determination (R^2=.031) reveals that 3.1% of the students' mean performance was accounted for by teachers' skills to give many exercises to students. This study concludes that schools where teachers give many exercises to students perform better than schools where teachers give insufficient exercises to students.

From table 5.2, it is also clear that there is no significant correlation between teachers' skills in ICT tools used in teaching and students' mean performance (R=-.183, p>.05). Basing on the coefficient of determination (R^2=.033), 3.3% of variation in students' mean performance was accounted for by teachers' skills in ICT tools used in teaching.

The results from table 5.2 also indicate that teachers' ability to prepare exercises to give students in helping their critical thinking does not correlate with students' mean performance in nine years basic education (R=-.268, p>.05). In fact, the coefficient of determination (R2=.072) indicates that 7.2% was accounted for by teachers' ability to prepare exercises to give students in helping their critical thinking.

Teachers knowledge to give proper guidance to students does not significantly correlate with students' mean performance (R=-.281, p>.05), the coefficient of determination obtained (R^2= .079), indicates that 7.9% of the students' mean performance in nine years basic education was accounted for by the teachers' knowledge to

give appropriate guidance to students.

Table 5.2 also indicates that the teachers' skills to manage materials delivered to them correlates with students' mean performance as indicated by the Pearson product moment correlation (R=-.301, p<.05). The degree of correlation between teachers' skills to manage materials and students' mean performance was explained by coefficient of determination in nine and twelve years basic education (R^2=.091) which means that 9.1% of variations in students' mean performance were accounted for by teachers' skills to manage materials delivered. Therefore, schools where teachers have skills to manage materials delivered to them perform better than schools where teachers don't have skills to manage materials delivered to them.

Finally, the calculated correlation coefficient as shown in table 5.2 revealed that there is positive correlations between teachers' behaviors impact on learning and students' mean performance in nine and twelve years basic education schools in Rwanda. Indeed the correlation shows that teachers' behaviors correlates with students' mean performance (R=-.352, p<.05). As shown by the coefficient of determination (R^2=.124) teachers' behaviors is explained by 12.4% of the school mean performance in nine and twelve years basic education. What it means is that schools with teachers who possess good behaviors towards students perform better than schools with teachers' bad behaviors.

5.3 Regression analysis of Cognitive and affective teachers' skills determinants on students' mean performance

The regression analysis was computed to show the influence of cognitive and affective teachers' determinants on student mean performance in nine years and twelve years basic education as perceived by head teachers in Nyamasheke District. Table 5.3 gives summary of the findings on the cognitive and affective teachers' skills determinants.

Table 5.3: Regression analysis of Cognitive and affective teachers' skills determinants on student mean performance

Predictors	Beta	P value	Partial Correlation
Teachers have professional training in the their subjects	0.145	0.287	0.16
Teachers possess knowledge to prepare their pedagogical documents helping learning	-0.016	0.907	-0.018
Teachers have ability to help slow students in the classroom	0.092	0.504	0.101
Teachers have ability to prepare exercises to give students helping their critical thinking	-0.063	0.651	-0.068
Teachers have knowledge to cooperate with parents with students problems	-0.15	0.274	-0.165
Teachers behaviors have impact on student learning	-0.022	0.877	-0.023
Teachers have knowledge to give proper guidance to students	-0.231	0.158	-0.212
Teachers have ability to communicate to students all activities to take place	0.035	0.8	0.038
Teachers understand the consequences of humiliating students who failed to respond in the classroom	0.08	0.57	0.086
Teachers possess skills to evaluate all students during teaching	0.002	0.988	0.002
Teachers understand the importance of giving feedback to students on time	-0.003	0.981	-0.004
Teachers have skills to plan a remedial activity to students who have problems in their lessons	-0.286	0.033	-0.316
Teachers possess skills to give many exercises to students	-0.066	0.631	-0.073
Teachers visit the students at home to know their problems	-0.137	0.322	-0.149
Teachers have knowledge to report in the meeting of PTA to inform parents how to help their children	-0.052	0.714	-0.056
Teachers possess skills to implement curriculum as it is required	-0.167	0.22	-0.184
Teachers have skills to create conducive environment to facilitate students to learn	0.01	0.943	0.011
Teachers have skills to create games involving students in co-curricular activities	-0.031	0.821	-0.034
Teachers have knowledge to use concrete materials in helping students to create new materials	-0.154	0.258	-0.17
Teachers have skills to manage materials delivered to them	0.137	0.32	0.15
Teachers have skills to cooperate with students	0.158	0.253	0.172

Predictors	Beta	P	Partial
Teachers have ICT skills on tools used in teaching	-0.103	0.452	-0.114
Teachers have skills to use wall pictures related to his subject	-0.289	0.036	-0.31
Teachers have knowledge of using audio and audio-visual materials	0.082	0.58	0.084
Teachers arrive at work on time	0.304	0.025	0.331
Teachers have knowledge in making local materials in the absence of original ones	-0.066	0.63	-0.073

*p<.05
Dependent variable student mean performance
R^2=.672 (67.2%) **Adjusted R^2**=.207 (20.7%)

Table 5.3 indicates the results of teachers' professional training in their subjects β=0.145,p value =0.287; teachers' knowledge to prepare their pedagogical documents helping students learning β=-0.016, p value 0.907; teachers with ability to help slow students in the classroom β=0.092,p=0.504; teachers' ability to prepare many exercises to give students helping their critical thinking β=-0.063, p value =0.651; teachers' knowledge to cooperate with parents talking about students problems β=-0.15, p value 0.274; teachers' behaviors impacting on students' learning β=-0.022, p value 0.877; teachers' knowledge to give appropriate guidance to students β=-0.231, p value 0.158; teachers' ability to communicate to students all activities to take place β=0.035, p value=0.8; teachers' understanding of the consequences of humiliating students who failed to respond in the classroom β=0.08, p value 0.57; teachers' skills to evaluate all students during teaching β=0.002, p value =0.988; teachers' understanding of the importance of giving students feedback on time β=-0.003, p value 0.981; teachers' skills to give many exercises to students β=-0.066, p value 0.631; teachers' visiting of the students at home to know their problems β=-0.137, p value 0.322; teachers' knowledge to report in the meeting of PTA to inform parents how to help their children β=-0.052, p value 0.714; Teachers' skills to implement curriculum as it is required β=-0.167, p value= 0.22; Teachers 'skills to create conducive environment to facilitate students to learn β=0.01, p value 0.943; Teachers' skills to create games involving students in co-curricular activities β=-0.031, p value 0.821; Teachers' knowledge to use concrete materials in helping students to create new materials β=-0.154, p value 0.258; Teachers skills' to manage materials delivered to them β=0.137, p value 0.32; Teachers' skills to cooperate with students β= 0.158, p value 0.253; Teachers' ICT skills on tools used in teaching β=-0.103, p value 0.452; Teachers' knowledge of using audio and audio-visual materials β=-0.082, p value 0.58; Teachers' knowledge in making local materials in the absence of original ones β=-0.066, p value 0.63.

Based on the findings, it is to be noted that there is no influence between cognitive, affective teachers skills determinants on students' performance in nine year and twelve years basic education in Rwanda as perceived as per the items listed above because p value is more than α=0.005, This means that they are not predictors of students' performance.

On another hand, concerning factors such as teachers' skills to plan remedial activity to students who have problems in their lessons β=-0.286, p value 0.033, teachers' skills to use wall pictures related to their subjects β=-0.289, p value 0.036; teachers' arrival at work on time β=0.304, p value 0.025, the results showed that they are not statistically significant predictors of students' performance in nine years and twelve years basic education with their p value inferior to α=0.005. These results conflict with Laura & Kentel (1998)'s stating that there is a positive linear relationship between teacher nonverbal and verbal immediacy and perceived cognitive, affective, and behavior learning.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.820	.672	.207	6.72316	.672	1.444	27	19	.205

The determination coefficient (R square) from the table above which is .672 implies that 67.2% of the total variance in students' performance has been explained by cognitive and affective teachers' skills determinants. As R2=207, p value =.205> .05, there is weak statistically significance of cognitive and affective teachers skills determinants. Cognitive and affective teachers' skills determinants contributes not much on students' performance in nine years and twelve years basic education.

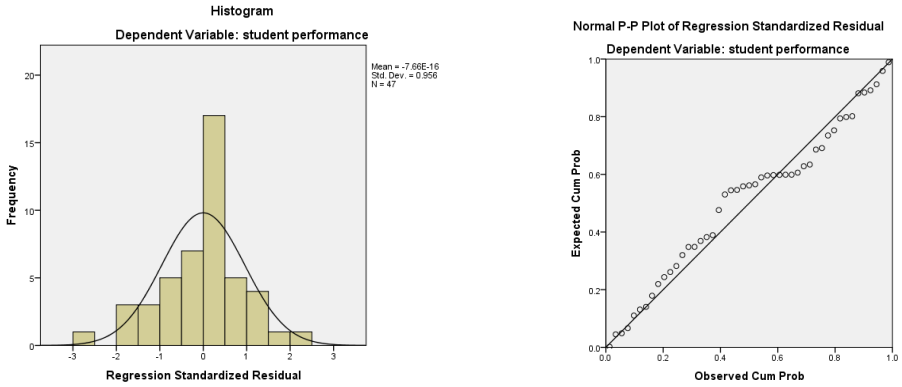
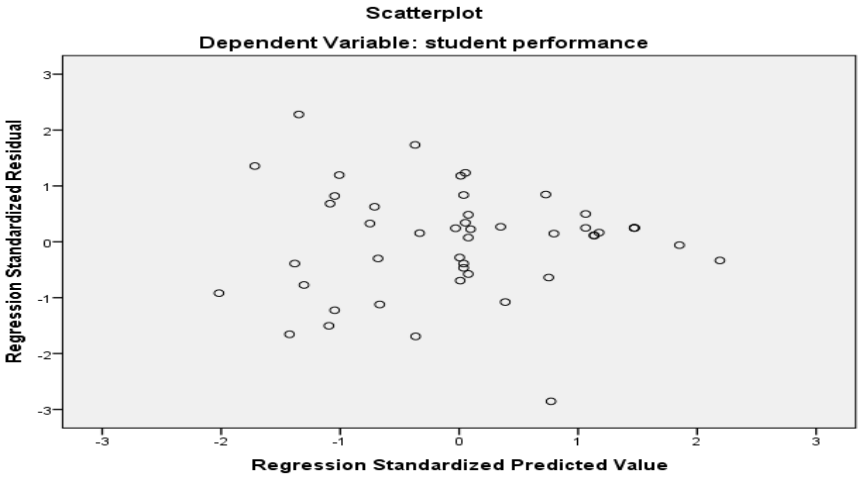


Figure 1: **Histogram of Cognitive and Affective Teachers Skills Determinants**



In conclusion, cognitive and affective teachers' skills determinants are very crucial in every teaching and learning process in education so that learners can acquire knowledge, skills, attitudes and values. It is also to be mentioned that skilled people enhance the development of a country.

Based on the results, the study indicated that the average mean from participants' views on the cognitive and affective teachers skills determinants rated as low with (Mean=2.27,SD=.1.18). Teachers' knowledge of using audio and audio-visual materials rated as low with (Mean=2.48, SD=1.09), teachers' knowledge in making local materials in the absence of original ones rated as low with (Mean=2.44, SD=0.97), teachers' skills to create conducive environment to facilitate students to learn rated as low with (Mean=2.33, SD=1.12), teachers' to use concrete materials in helping students to create new materials rated as low with (2.27, SD=1.18). In accordance with the results discussed above, Bello (2016) found out that there is significant relationship between students' academic performance and instructional materials.

This study also showed that cognitive and affective teachers' skills determinants are not predictors and have no significant correlation with students' mean performance. Basing on the same results as in table 5.3, teachers' skills to create conducive environment to facilitate students to learn have no significant correlation with students' mean performance (R=-0.008, p>.05), the coefficient of determination (R2=0.000) indicates that teachers' skills to create conducive environment for facilitating students to learn accounted 0% of students' mean performance in nine and twelve years basic education. Whereas teacher's behaviors with (R=-.352,p=.014< .05) and teachers' skills on management of materials with R=-.301, p=.037<.05 correlate with students' mean performance. These results conflict with the remarks of Xin et al (2004) who found out that general teachers' credentials have no effect on any type of cognitive development on students' test score. Sara & Stephen (2021) using a structural equation model founded that teachers' teaching self- efficacy and teachers' feeling of negative affect may be associated with students' academic achievement but they are not predictors. The study recommends the government to train teachers on schools materials management and teachers' behaviors

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